

**Notice of Allowability**

Application No.

10/521,723

Examiner

Karen A. Canella

Applicant(s)

SHI ET AL.

Art Unit

1643

**- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 10/1/09 and the submission of 11/20/09.
2. ☒ The allowed claim(s) is/are 6-15, renumbered as 1-10, respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20091009.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

/Karen A Canella/  
Primary Examiner, Art Unit 1643

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with N. Nicole Endejann on December 16, 2009.

The application has been amended as follows:

In the specification:

Paragraph [0001] has been replaced with the following:

This application is a 371 of PCT/US03/22071, filed July 15, 2003 which claims benefit of 60/395,918, filed July 15, 2002, the entirety of which is incorporated by reference herein.

Paragraph [0002] has been replaced with the following:

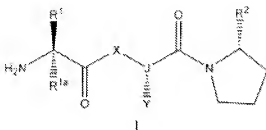
This application is a CIP of PCT/US02/17342, filed May 31, 2002, which claims benefit of 60/294,682, filed May 31, 2001 and 60/345,630, filed January 3, 2002. This application is a CIP of 09/965,967, filed September 28, 2001, which claims benefit of 60/236,574, filed September 29, 2000, and 60/256,830, filed December 20, 2000. The entire contents of each of the aforementioned applications are incorporated by reference herein.

In the claims:

Claim 6 has been replaced with the following:

6. A compound of formula I

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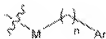


wherein:

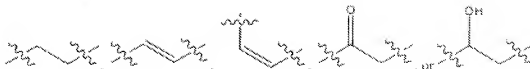
 $R^1$  is methyl, ethyl, n-propyl, isopropyl, or ethenyl; $R^{19}$  is H or methyl;

X is -O-, -S-,  $CH_2$ -, or -NH-, and J is -CH- or -N-, provided that when J is -N-, X is -CH<sub>2</sub>- or -NH-;

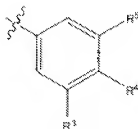
Y is H, methyl, ethyl, n-propyl, or isopropyl;

 $R^1$  is:

M is:



Ar is:



$R^3$ ,  $R^4$  and  $R^5$  are each independently H, methyl, ethyl, n-propyl, isopropyl, halo, cyano,  $-(CH_2)_p-C(=O)OH$ ,  $-(CH_2)_p-C(=O)O$ -alkyl, or  $-(CH_2)_p-C(=O)NH_2$ ;

n and p are each independently the integer 0, 1, 2, or 3, and the sum of n plus p is the integer 2 or 3;

provided that at least one of  $R^3$ ,  $R^4$  and  $R^5$  is H, methyl, ethyl, n-propyl, isopropyl, halo or cyano;

provided that when one or more of  $R^3$  and  $R^5$  is isopropyl,  $R^4$  is other than isopropyl;

provided that when  $R^4$  is isopropyl,  $R^3$  and  $R^5$  are each independently other than isopropyl;

or a pharmaceutically acceptable salt thereof,

wherein said compound binds to an Inhibitor of Apoptosis Protein (IAP).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen A. Canella whose telephone number is (571)272-0828. The examiner can normally be reached on 10-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on (571)272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Karen A Canella/

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Primary Examiner, Art Unit 1643